

B5Cmp D1
16. (once amended) A fused disconnect switch in accordance with Claim 13 further comprising a second primary fuse link received in said fuse receptacle, said first and second fuses connected in parallel in said fuse housing.

Remarks

The Office Action mailed February 20, 2003 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-23 are now pending in this application. Claims 1, 6, 7, 9, 12, 13 and 16 have been amended. Claims 1-23 stand rejected.

Claims 6, 12, and 16 have been amended for clarity and consistency with the respective base claims.

An information disclosure statement is submitted herewith. Applicants request acknowledgement of the information disclosure statement and consideration thereof in the next communication from the Office.

A substitute set of formal drawings is submitted herewith in response to the request set forth in the Office Action.

The objection to the drawings is respectfully traversed. Applicants note that a parallel connection of the first and second fuse links is illustrated in Figure 9. Applicants therefore request that the objection to the drawings be withdrawn.

The rejection of Claim 9 under 35 U.S.C. § 112 is respectfully traversed. Claim 9 has been amended to depend from Claim 7, which avoids the noted issue in the Office Action. Applicants accordingly request that the Section 112 rejection of Claim 9 be withdrawn.

The rejection of Claims 18 and 23 under 35 U.S.C. § 103 as being unpatentable over Happ et al. (U.S. Patent No. 5,559,662) is respectfully traversed.

Happ et al. describe a fused disconnect switch including a base unit (30) and a removable fuse holder (10) insertable into base unit (30). Fuse holder (10) includes fuseclips (34) and (42) for holding a cylindrical fuse (14) in place and conducting current therethrough. Fuse clip (34) is integrally formed with a blade contact (26) which is received in a contact (38) in base unit (30), which is turn coupled to a line contact (39) extending from the base unit (30) and connectable to a line side bus. Fuse clip (42) extends from the fuse holder (10) and forms a contact (24) that is received in a male connection piece (44) in base unit (40), which in turn extends to a load terminal (40) extending from the base unit (30). One of the fuse end caps (105) includes a spring loaded pin contact (45) to establish an electrical connection with a plate (103) to energize an LED (48) through a line-side connection to fuse clip (34) coupled to fuse cap (105) when fuse (14) opens. When the LED is energized, an alarm signal is sent out of base (30) through an alarm terminal output (50) integrated into base unit (30). Happ et al. col. 3, lines 51-66, col. 4, lines 16-21 and lines 36-64 and Figures 1, 3, and 4.

Claim 18 recites a fused disconnect switch comprising "a switch housing comprising a fuse receptacle, first and second line-side contact assemblies extending from said fuse receptacle, and first and second load-side contact assemblies extending from said fuse receptacle," and "a fuse comprising a first primary fuse link extending between said first line-side contact assembly and said first load-side contact assembly and a second primary fuse link extending between said second line-side contact assembly and said second load-side contact assembly."

It is clear from Figure 4 of Happ et al. that the fuse (14) described therein includes only one fuse link (100). Happ does not describe or suggest the provision of two fuse links (100) in the fuse.

The Office Action states that:

[I]t would have been obvious to a person of ordinary skill in the fuse art at the time the invention was made to provide a second primary fuse link in said device of Happ in order to increase current rating of the device, since it has been held

that mere duplication of the essential working parts of the device involves only routine skill in the art.

Office Action dated February 20, 2003 page 4 (citing St. Regis Paper Company v. Bemis Company Inc., 193 USPQ 8 (7th Cir. 1977)).

With respect to the cited authority (i.e., the St. Regis Paper case), Applicants note that the cited case addresses the issue of utilizing multiple layers to produce a bag, with each of the layers including known elements in combination, and the concept of using multiple layers to produce bags also known. In the instant case, none of the cited art evidences that it is known to provide one fuse having first and second primary fuse links extending between respective first and second line-side and load-side contact assemblies in a switch housing.

Applicants note that Happ et al. state that the disconnect device is used in low power DC applications drawing 10-15A in operation, thereby presenting no real issue with respect to the capacity of the fuse (14) to operate within desired ranges. Even so, if such an issue was present, Applicants submit that the most straightforward way to increase the current rating for the device described by Happ et al. at the time the invention was made would have been to use a different fuse having a higher rating in the Happ et al. device. There is no suggestion in the art that providing a first primary fuse link and a second primary fuse link in a single fuse would be advantageous or desirable to increase the current rating of the device when another fuse having a single fuse link with a higher rating could be substituted for a lower capacity fuse.

Additionally, Applicants submit that providing a second primary fuse link in a single fuse is not mere duplication of a working part of the device. Rather, mere duplication (according to the cited authority) would be to provide a second identical fuse having one fuse link therein as set forth in Happ et al., or a second disconnect device identical to that described by Happ et al. Rather, the addition of a second primary fuse link to the fuse described by Happ et al. is a structural modification to the fuse, i.e., a different fuse than that described by Happ et al.

For at least these reasons, Applicants submit that Claim 18 is patentable over Happ et al.

Claim 23 depends, directly or indirectly, from independent Claim 18. When the recitations of Claim 23 are considered in combination with the recitations of Claim 18, Applicants submit that dependent Claim 23 likewise is patentable over Happ et al.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 18 and 23 be withdrawn.

The rejection of Claim 21 under 35 U.S.C. § 103 as being unpatentable in view of Marach et al. (U.S. Patent No. 5,355,274) is respectfully traversed.

Marach et al. describe a fused disconnect device including a housing or enclosure (130) which includes a GMT fuse housing (176) for receiving an alarm fuse (510), and a fuse holder assembly (400) including a protective fuse (520) having end caps (524), (526) and a fusible element to provide overload and fault protection. See Marach et al. col. 11, lines 24-28. Marach et al. does not describe a fuse having two primary fuse links extending between respective line-side and load-side contacts..

Claim 21 depends from Claim 18, which recites a fused disconnect switch comprising "a switch housing comprising a fuse receptacle, first and second line-side contact assemblies extending from said fuse receptacle, and first and second load-side contact assemblies extending from said fuse receptacle," and "a fuse comprising a first primary fuse link extending between said first line-side contact assembly and said first load-side contact assembly and a second primary fuse link extending between said second line-side contact assembly and said second load-side contact assembly."

Marach et al. neither describe nor suggest the fuse recited in Claim 18. Rather, Marach et al. describe a protective fuse (520) having one primary fuse link therein and a separate alarm fuse (176) integrated into a housing (130). Claim 18 is therefore submitted to be patentable over Marach et al.

Claim 21 depends, directly or indirectly, from independent Claim 18. When the recitations of Claim 21 are considered in combination with the recitations of Claim 18, Applicants submit that dependent Claim 21 likewise is patentable over Marach et al.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claim 21 be withdrawn.

The rejection of Claims 19, 20 and 22 under 35 U.S.C. § 103 as being unpatentable in view of LeVantine et al. (U.S. Patent No. 6,002,580) is respectfully traversed.

LeVantine et al. describes a circuit breaker power distribution panel devoid of fuses.

Claims 19, 20 and 22 each depend from independent Claim 18, which recites a fused disconnect switch comprising "a switch housing comprising a fuse receptacle, first and second line-side contact assemblies extending from said fuse receptacle, and first and second load-side contact assemblies extending from said fuse receptacle," and "a fuse comprising a first primary fuse link extending between said first line-side contact assembly and said first load-side contact assembly and a second primary fuse link extending between said second line-side contact assembly and said second load-side contact assembly."

LeVantine neither describes nor suggest the fused disconnect switch recited in Claim 18. Moreover, there is no suggestion in the art that it would have been obvious to use the pins (104), (106) described by LeVantine and employed in a circuit breaker system, in a fused switch such as the present invention. For a number of reasons, fuses and circuit breakers are not ordinarily considered interchangeable devices such that a connection scheme used for circuit breakers would be desirable for fused products.

Claims 19, 20, and 22 depend, directly or indirectly, from independent Claim 18. When the recitations of Claim 19, 20, and 22 are considered in combination with the recitations of Claim 18, Applicants submit that dependent Claims 19, 20, and 22 likewise is patentable over Marach et al.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claim 19, 20 and 22 be withdrawn.

The rejection of Claims 1-8 and 10-17 under 35 U.S.C. § 103 as being unpatentable over Happ et al. in view of Marach et al. and further in view of LeVantine et al. is respectfully traversed.

Happ et al. is described above. Notably, Happ et al. describe an indicating LED (48) in connection with only one fuse end cap (105). The LED is not in communication with the other end cap of the fuse. Rather, the LED is energized with a line side connection only in the fuse end cap (105) which facilitates an alarm signal output through the alarm terminal (50).

Marach et al. is described above, and notably describe an alarm fuse separate from a primary protection fuse. The alarm fuse is accommodated in a switch housing and the protection fuse is accommodated in a fuse holder assembly.

LeVantine et al. describes a circuit breaker power distribution panel devoid of fuses.

Claim 1 recites a fused disconnect switch comprising "at least one switch housing assembly comprising a fuse receptacle and first and second terminal contact assemblies extending therefrom, at least one of said first and second contact assemblies comprising a bullet contact assembly," and "a retractable fuse comprising a housing and first and second terminals extending from said housing, a primary fuse link within said housing and extending between said first and second terminals, and an open circuit indication device within said housing and coupled to said first and second terminals."

None of the cited references, alone or in combination, describe or suggest the fused disconnect switch recited in Claim 1. Specifically, none of the references describe a retractable fuse comprising a housing and first and second terminals extending from said housing, a primary fuse link within said housing and extending between said first and second terminals, and an open circuit indication device within said housing and coupled to said first and second terminals.

Rather, Happ et al. describe an LED in communication with only one end cap of a fuse. Marach et al. describe a separate alarm fuse separately housed from the primary fuse. LeVantine et al. does not describe fuses at all. Collectively, the cited references fail to teach each limitation of Claim 1.

Moreover, there is no suggestion in the art that it would have been obvious to use the pins (104), (106) described by LaVantine and employed in a circuit breaker system, in a fused switch such as the present invention. For a number of reasons, fuses and circuit breakers are not ordinarily considered interchangeable devices such that a connection scheme used for circuit breakers would be desirable for fused products.

For the reasons set forth above, Claim 1 is therefore submitted to be patentable over Happ et al. in view of Marach et al. and further in view of LeVantine et al.

Claims 2-6 depend, directly or indirectly, from independent Claim 1. When the recitations of Claims 2-6 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 2-6 likewise are patentable over Happ et al. in view of Marach et al. and further in view of LeVantine et al.

Claim 7 recites a fused disconnect switch comprising "at least one switch housing assembly comprising a switch housing defining a fuse receptacle and first and second terminal contact assemblies extending therefrom, at least one of said first and second contact assemblies comprising a terminal stud contact assembly," and "a retractable fuse comprising a fuse housing and first and second terminals extending from said fuse housing, a primary fuse link within said fuse housing and connected to said first and second terminals, and an open circuit indication device within said fuse housing and coupled to said first and second terminals."

None of the cited references, alone or in combination, describe or suggest the fused disconnect switch recited in Claim 7. Specifically, none of the references describe a retractable fuse comprising a housing and first and second terminals extending from said housing, a primary

fuse link within said housing and extending between said first and second terminals, and an open circuit indication device within said housing and coupled to said first and second terminals.

Rather, Happ et al. describe an LED in communication with only one end cap of a fuse. Marach et al. describe a separate alarm fuse separately housed from the primary fuse. LeVantine et al. does not describe fuses at all. Collectively, the cited references fail to teach each limitation of Claim 7.

For the reasons set forth above, Claim 7 is submitted to be patentable over Happ et al. in view of Marach et al. and further in view of LeVantine et al.

Claims 8-12 depend from independent Claim 7. When the recitations of Claims 8-12 are considered in combination with the recitations of Claim 7, Applicants submit that dependent Claims 8-12 likewise are patentable over Happ et al. in view of Marach et al. and further in view of LeVantine et al.

Claim 13 recites a fused disconnect switch comprising "at least one switch housing assembly comprising a housing defining a fuse receptacle and first and second terminal contact assemblies extending therefrom, one of said first and second contact assemblies comprising a bullet contact assembly, one of said first and second contact assemblies comprising a terminal stud contact assembly," and "a retractable fuse received within said fuse receptacle and comprising a fuse housing and first and second terminals extending therefrom, a primary fuse link and an open fuse indication device within said fuse housing and coupled to said first and second terminals."

None of the cited references, alone or in combination, describe or suggest the fused disconnect switch recited in Claim 13. Specifically, none of the references describe a retractable fuse comprising a housing and first and second terminals extending therefrom, a primary fuse link and an open fuse indication device within said fuse housing and coupled to said first and second terminals. Rather, Happ et al. describe an LED in communication with only one end cap of a fuse. Marach et al. describe a separate alarm fuse separately housed from the primary fuse.

LeVantine et al. does not describe fuses at all. Collectively, the cited references fail to teach each limitation of Claim 13.

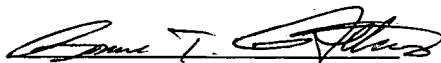
For the reasons set forth above, Claim 13 is submitted to be patentable over Happ et al. in view of Marach et al. and further in view of LeVantine et al.

Claims 14-17 depend from independent Claim 13. When the recitations of Claims 14-17 are considered in combination with the recitations of Claim 13, Applicants submit that dependent Claims 14-17 likewise are patentable over Happ et al. in view of Marach et al. and further in view of LeVantine et al.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 1-8 and 10-17 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



Bruce T. Atkins
Registration No. 43,476
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070



BUS-026166
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Scoggin et al.	:	
	:	Art Unit: 2835
Serial No.: 09/981,017	:	
	:	Examiner: Vortman, Anatoly
Filed: October 16, 2001	:	
	:	
For: COMPACT FUSED	:	
DISCONNECT SWITCH	:	

SUBMISSION OF MARKED UP CLAIMS AND PARAGRAPHS

Hon. Assistant Commissioner for Patents
Washington, D.C. 20231

In furtherance of the response to the Office Action dated February 20, 2003 submitted herewith, Applicants hereby submit marked up versions of the amendments therein.

IN THE CLAIMS

1. (once amended) A fused disconnect switch comprising:

at least one switch housing assembly comprising a fuse receptacle and first and second terminal contact assemblies extending therefrom, at least one of said first and second contact assemblies comprising a bullet contact assembly; and

a retractable fuse comprising a housing and first and second terminals extending from said housing, a primary fuse link within said housing and extending between said first and second terminals, and an open circuit indication device within said housing and coupled to said first and second terminals.

6. (once amended) A fused disconnect switch in accordance with Claim 1 further comprising a second primary fuse link [received in said fuse receptacle] within said housing, said first and second fuse links connected in parallel.

7. (once amended) A fused disconnect switch comprising:

at least one switch housing assembly comprising a switch housing defining a fuse receptacle and first and second terminal contact assemblies extending therefrom, at least one of said first and second contact assemblies comprising a terminal stud contact assembly; and

a retractable fuse comprising a fuse housing and first and second terminals extending from said fuse housing, a primary fuse link within said fuse housing and connected to said first and second terminals, and an open circuit indication device within said fuse housing and coupled to said first and second terminals.

9. (once amended) A fused disconnect switch in accordance with Claim [8] 7, the other of said first and second contact assemblies comprising a bullet contact assembly.

12. (once amended) A fused disconnect switch in accordance with Claim 7 further comprising a second primary fuse link [received in said fuse receptacle] within said fuse housing, said first and second fuse links connected in parallel.

13. (once amended) A fused disconnect switch comprising:

at least one switch housing assembly comprising a housing defining a fuse receptacle and first and second terminal contact assemblies extending therefrom, one of said first and second contact assemblies comprising a bullet contact assembly, one of said first and second contact assemblies comprising a terminal stud contact assembly; and

a retractable fuse received within said fuse receptacle and comprising a fuse housing and first and second terminals extending therefrom, a primary fuse link and an open fuse indication device within said fuse housing and coupled to said first and second terminals.

16. (once amended) A fused disconnect switch in accordance with Claim 13 further comprising a second primary fuse link received in said fuse receptacle, said first and second fuses connected in parallel in said fuse housing.

Respectfully Submitted,



Bruce T. Atkins
Registration No. 43,476
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070